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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,219	01/22/2004	Sadafumi Kanada	0124/0021	2736
21395	7590	07/13/2007		
LOUIS WOO LAW OFFICE OF LOUIS WOO 717 NORTH FAYETTE STREET ALEXANDRIA, VA 22314			EXAMINER KRASNIC, BERNARD	
			ART UNIT	PAPER NUMBER
			2624	
			MAIL DATE	DELIVERY MODE
			07/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/761,219	KANADA, SADAFUMI	
	Examiner	Art Unit	
	Bernard Krasnic	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>04/01/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. The Applicant elects claims 1-3 in the reply filed on 05/18/2007. Claim 4 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected subcombination, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 05/18/2007.

Specification

2. The disclosure is objected to because of the following informalities:

Page 1, line 6: The -- CROSS REFERENCE TO RELATED APPLICATIONS -- section of the specification is required to be placed above the "Background of the Invention" section to inform of any related applications, in this case the Foreign Priority applications "Japan 2003-042044 02/20/2003" and "Japan 2003-392899 11/21/2003".

Appropriate correction is required.

Claim Objections

3. Claims 2-3 are objected to because of the following informalities:

Claims 2-3, line 1 respectively: "An image data processing" should be -- The image data processing --.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Han et al (U.S. 2002/0012464 A1).

Re Claim 1: Han discloses an image data processing apparatus comprising first means / edge detector (100) for monitoring a level of a first digital signal representative of an original picture / IN in a prescribed region having a predetermined number of pixels, and deciding whether or not the monitored level changes discontinuously at a pixel / edge of interest in the prescribed region (see Fig. 12, paragraphs [0093], [0094] and [0097], paragraph [0004], lines 1-2 and 10, abstract 25-28); second means / linear interpolation unit (300) for generating first data representative of a linear interpolation coefficient in response to a conversion magnification / magnifying or reducing dependent upon output aspect ratio (see Fig. 12, paragraphs [0093], [0094] and [0097], paragraph [0004], lines 1-2 and 10, abstract 25-28); third means / nonlinear interpolation unit (310) for generating second data representative of a non-linear-interpolation coefficient in response to the conversion magnification / magnifying or reducing dependent upon the output aspect ratio (see Fig. 12, paragraphs [0093], [0094] and [0097], paragraph [0004], lines 1-2 and 10, abstract 25-28); fourth means / MUX (320) for selecting / selects the first data generated by the second means / linear interpolation unit (300) as

selection-result data when the first means decides that the monitored level does not change discontinuously / no edge at the pixel of interest, and selecting the second data generated by the third means / nonlinear interpolation unit (310) as the selection-result data when the first means decides that the monitored level changes discontinuously / edge at the pixel of interest (see Fig. 12, paragraphs [0093], [0094] and [0097], paragraph [0004], lines 1-2 and 10, abstract 25-28); and fifth means / MUX (320) for subjecting the first digital signal to an interpolation-based filtering process responsive to the selection-result data generated by the fourth means to convert the first digital signal / IN into a second digital signal / OUT representative of a conversion-result picture (see Fig. 12, paragraphs [0093], [0094] and [0097], paragraph [0004], lines 1-2 and 10, abstract 25-28).

The limitations, as recited in claim 1, "first means for monitoring" in line 2, "second means for generating" in line 6, "third means for generating" in line 8, "fourth means for selecting" in line 11, and "fifth means for subjecting" in line 17 invoke 35 U.S.C. 112, 6th paragraph.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Han in view of Toshiyuki (Japan 2002-135569). The teachings of Han have been discussed above.

Re Claim 2: Han further discloses wherein the third means / nonlinear interpolation unit (310) and the fourth means / MUX (320) comprise means for using the level of the first digital signal at the pixel of interest as a level of the second digital signal at a pixel in a setting range / pixel signal value containing a time point corresponding to the pixel of interest when the first means decides that the monitored level changes discontinuously / edge at the pixel of interest, and means for the conversion magnification decreases / reducing (see Fig. 12, paragraphs [0093], [0094] and [0097], paragraph [0004], lines 1-2 and 10, abstract 25-28).

However, Han fails to specifically disclose or fairly suggest means for increasing the setting range as the conversion magnification decreases [Han discloses conversion magnification reducing].

Toshiyuki discloses means for increasing the setting range / matching the waveform level information as the conversion magnification decreases / reduced picture (see Toshiyuki, abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Han's apparatus using Toshiyuki's teachings by including the waveform level information matching in order to enhance the magnified output image (see Toshiyuki, abstract).

The limitation, as recited in claim 2, "means for using" in line 2 invokes 35 U.S.C. 112, 6th paragraph.

Re Claim 3: Han further discloses wherein the third means / nonlinear interpolation unit (310) and the fourth means / MUX (320) comprise means for using the level of the first digital signal at the pixel of interest as a level of the second digital signal at a pixel in a setting range / pixel signal value containing a time point corresponding to the pixel of interest when the first means decides that the monitored level changes discontinuously / edge at the pixel of interest, and means for the conversion magnification increases / magnifying in cases where the conversion magnification corresponds to picture enlarging conversion (see Fig. 12, paragraphs [0093], [0094] and [0097], paragraph [0004], lines 1-2 and 10, abstract 25-28).

However, Han fails to specifically disclose or fairly suggest means for increasing the setting range as the conversion magnification increases [Han discloses conversion magnification magnifying].

Toshiyuki discloses means for increasing the setting range / matching the waveform level information as the conversion magnification increases [Han discloses conversion magnification magnifying] (see Toshiyuki, abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Han's apparatus using Toshiyuki's teachings by including the waveform level information matching in order to enhance the magnified output image (see Toshiyuki, abstract).

The limitation, as recited in claim 3, "means for using" in line 2 invokes 35 U.S.C. 112, 6th paragraph.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chung et al discloses an image interpolation apparatus and method; Kameoka et al discloses a video display monitor employing image interpolation; Dube et al discloses a method and apparatus for processing an image; Shimazu et al discloses a method of and apparatus for interpolating gradation levels of image.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Krasnic whose telephone number is (571) 270-1357. The examiner can normally be reached on Mon-Thur 8:00am-4:00pm and every other Friday 8:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bernard Krasnic
June 25, 2007



JINGGE WU
SUPERVISORY PATENT EXAMINER